

REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 16-29 were pending. By the present response, claims 30-32 have been added and claim 29 has been amended. Thus, upon entry of the present response, claims 16-32 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: page 7, lines 22-27; and page 13, lines 25-32.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 16-29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. U.S. Patent Application Publication No. 2005/0066571 to Wakefield (hereafter "*Wakefield*") in view of U.S. Patent No. 5,880,241 to Brookhart et al. (hereafter "*Brookhart et al.*") on the grounds set forth in paragraph 5 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

The present invention is directed to a colloidal dispersion having a formulation which renders it suitable for certain uses, such as a fuel additive. The colloidal dispersion of the present invention comprises particles of a rare earth compound, an acid and an organic phase, as well as an antioxidant. The presence of an antioxidant provides the colloidal dispersion with the advantage of making the

stability of the dispersion independent of, for example, the diesel fuel in which it is incorporated. (See, e.g., page 2, lines 9-12 of the present specification).

A colloidal dispersion formed according to the principles of the present invention is set forth in claim 16. Claim 16 recites:

16. *A colloidal dispersion comprising particles of a rare earth compound, an acid, an organic phase, and an antioxidant.*

Wakefield is directed to a fuel or fuel additive which comprises particles of cerium oxide which have been doped to improve the catalytic efficiency of the cerium oxide. However, *Wakefield* fails to disclose a colloidal dispersion having the formulation set forth in claim 16 above.

It is asserted in paragraph 5 of the Official Action that *Wakefield* teaches: "a fuel of fuel additive comprising. . . an antioxidant that is phenolic, an alkylphenol such as 2,6-di-tert-butylphenol (paragraph 53); and an organic carboxylic acid (paragraph 27) which is an amphiphilic acid."

However, with respect to the antioxidant, paragraph [0053] of *Wakefield* merely describes the use of antioxidants as potential diesel fuel additives. The cited portion of *Wakefield* does not support the assertion that *Wakefield* discloses a colloidal dispersion which includes an antioxidant. Similarly, with respect to the organic acid, the description appearing in paragraph [0027] of *Wakefield* describes the use of an organic acid as a coating agent for coating the cerium oxide particles. *Wakefield* does not disclose that this organic acid remains and forms part of a colloidal dispersion as required by the presently claimed invention.

As noted above, the colloidal dispersion of the present invention which includes, *inter alia*, an antioxidant and an organic acid, provides the advantage of

improving the stability of the dispersion, regardless of the composition of the fuel into which it may be incorporated. *Wakefield* fails to contain any such disclosure.

Brookhart et al. is cited as teaching a crystallinity of at least 20%. Therefore, even if the teachings of *Brookhart et al.* were applied exactly as suggested in the grounds for rejection, the claimed invention would not result. Namely, *Brookhart et al.* fails to cure the deficiencies previously noted above in connection with the teachings of *Wakefield*.

In addition, it is also asserted in paragraph 5 of the Official Action that "both references teach fuel additives." The only reference that applicants can find in *Brookhart et al.* using the polymers described therein as additives is in connection with lubricating oil additives. This portion of the *Brookhart et al.* disclosure (column 55, lines 50-55) is cited in paragraph 5 of the Official Action in support of the rejection. However, applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to have modified a fuel or fuel additive with a lubricating oil additive, as alleged in the grounds for rejection. The purposes of the two additives are completely different from one another, and thus would not suggest their combination to one of ordinary skill in the art.

For at least the reasons noted above, reconsideration and withdrawal of the rejection is respectfully requested.

The remaining claims depend from claim 16. Thus, these claims are also distinguishable over the proposed combination of *Wakefield* and *Brookhart et al.* for at least the same reasons noted above.

NEW CLAIMS

By the present response, newly presented independent claim 30 has been added. Like claim 16, claim 30 recites a colloidal dispersion which includes, *inter alia*, an acid and an antioxidant. Thus, the proposed combination of *Wakefield* with *Brookhart et al.* also fails to disclose or suggest the requirements of claim 30 for at least the same reasons noted above in connection with the rejection of claim 16. In addition, claim 30 also recites a specific proportion of antioxidant to rare earth compound plus optional element E, which is suitable in the form of a colloidal dispersion or fuel additive. *Wakefield* also fails to contain any disclosure whatsoever concerning an appropriate amount of antioxidant for inclusion in a colloidal dispersion as required by newly presented claim 30.

Dependent claims 31 and 32 have also been added. These claims depend from claim 30, and thus are distinguishable over the applied prior art for at least the same reasons noted above in connection with the discussion of newly presented claim 30.

CONCLUSION

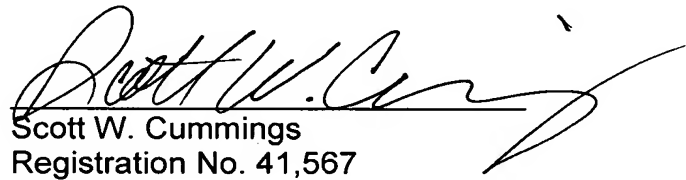
From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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